CLAIMS

What is claimed is:

1.   A method comprising:

determining if a sensor reading has changed;

determining, in response to said sensor reading having changed, if said sensor reading is toggling;

reporting, in response to said sensor reading toggling, a bouncing sensor-state error;

determining, in response to said sensor reading having not changed, if said sensor reading is stable;

determining, in response to said sensor reading being stable, if said sensor reading is different from a previous stable sensor reading; and

reporting, in response to said sensor reading being different from a most-recent stable sensor reading, a sensor state change.

2.   The method of claim 1 further comprising repeating said determinings and said reportings for a new sensor reading.

3.   The method of claim 1 further comprising repeating said determinings and said reportings for a new sensor reading in response to first said sensor reading not toggling.

4.   The method of claim 1 further comprising repeating said determinings and said reportings for a new sensor reading in response to first said sensor reading not being stable.

5.   The method of claim 1 further comprising repeating said determinings and said reportings for a new sensor reading in response to first said sensor reading being the same as a most-recent stable sensor reading

6.   The method of claim 1 further comprising reading a sensor state value.

7.   The method of claim 1 wherein said determining if said sensor reading is toggling comprises determining if a count of changes in said sensor state value has achieved a threshold.

8.   The method of claim 1 wherein said determining comprises monitoring said changes in said sensor state value for a predetermined period of time.

9. The method of claim 1 wherein said determining if said sensor reading is stable comprises determining if a count of stable sensor readings is greater than or equal to a stable reading sensor tolerance.

10. A method comprising:

retrieving a present sensor reading;

incrementing a reading change counter and setting a stable reading counter to zero in response to the present sensor reading not equaling an immediately previous sensor reading;

reporting a sensor reading bouncing error and resetting the reading change counter to zero in response to the reading change counter being greater than or equal to a reading change tolerance;

incrementing said stable reading counter in response to the present sensor reading equaling the immediately previous sensor reading;

resetting said stable reading counter and reading change counter to zero in response to said stable reading counter being greater than or equal to a stable reading tolerance;

reporting a state change event and setting said most-recent stable sensor reading equal to said present sensor reading in response to said present sensor reading not being equal to said most-recent stable sensor reading; and

setting said previous sensor reading to said present sensor reading.

11. The method of claim 10 further comprising repeating said retrieving, incrementings, reportings, resetting and setting.

12. The method of claim 10 further comprising repeating said retrieving, incrementings, reportings, resetting and setting in response to the reading change counter being less than a reading change tolerance.

13. The method of claim 10 further comprising repeating said retrieving, incrementings, reportings, resetting and setting in response to said stable reading counter being less than a stable reading tolerance.

14. The method of claim 10 further comprising repeating said retrieving, incrementings, reportings, resetting and setting in response to said present sensor reading being equal to said most-recent stable sensor reading.

15. The method of claim 10, further comprising:

initializing a present sensor reading, previous sensor reading and a most-recent stable sensor reading to each be equal to a default sensor state, prior to said retrieving;

setting a stable reading counter and reading change counter at zero, prior to said retrieving.

16. A computer program product comprising:

a computer usable medium having computer readable program code means embodied therein for causing a computer to, in iterative fashion:

retrieve a sensor reading;

determine if said sensor reading represents a changed sensor reading;

increment a reading change counter and set a stable reading counter to zero in response to the sensor reading having changed;

determine if a changed sensor reading is indicative of toggling;

report a sensor reading bouncing error and reset the reading change counter to zero in response to the reading change indicating the sensor reading is toggling;

increment said stable reading counter in response to the sensor reading having not changed;

determine if the unchanged sensor reading is stable;

reset said stable reading counter and said reading change counter to zero in response then unchanged sensor reading being stable;

determine if a stable unchanged sensor reading is different from a most-recent stable sensor reading;

report a state change event and set said most-recent stable sensor reading to be equal to the stable unchanged sensor reading; and

set a previous sensor reading to be equal to said sensor reading.

17. The computer program product of claim 16 wherein said code means further comprises code means for causing a computer to:

initialize a present sensor reading to be equal to a default sensor state value;

initialize said previous sensor reading to be equal to a default sensor state value;

initialize said most-recent stable sensor reading to be equal to a default sensor state value;

initialize said stable reading counter at zero; and

initialize said reading change counter at zero.

18. The computer program product of claim 16 wherein said code means loops in response to first said sensor reading not toggling.

19. The computer program product of claim 16 wherein said code means loops in response to said sensor reading not being stable.

20. The computer program product of claim 16 wherein said code means loops in response to said sensor reading being the same as a most-recent stable sensor reading

21. The computer program product of claim 16 wherein said code means determines if said sensor reading represents a changed sensor reading by determining if the retrieved sensor reading equals an immediately previous sensor reading.

22. The computer program product of claim 16 wherein said code means determines if a changed sensor reading is indicative of toggling by determining if a count of changes in the sensor state value has achieved a threshold.

23. The computer program product of claim 16 wherein said code means determines if the unchanged sensor reading is stable by determining if a count of stable sensor readings is greater than or equal to a stable reading sensor tolerance.

24.   A system comprising:

means for determining if a sensor reading has changed;

means responsive to said sensor reading having changed for determining if said sensor reading is toggling;

means responsive to said sensor reading toggling for reporting a bouncing sensor-state error;

means responsive to said sensor reading having not changed for determining if said sensor reading is stable;

means responsive to said sensor reading being stable for determining if said sensor reading is different from a previous stable sensor reading; and

means responsive to said sensor reading being different from a most-recent stable sensor reading for reporting a sensor state change.

25.   A system comprising:

means for retrieving a present sensor reading;

means for incrementing a reading change counter and setting a stable reading counter to zero in response to the present sensor reading not equaling an immediately previous sensor reading;

means for reporting a sensor reading bouncing error and resetting the reading change counter to zero in response to the reading change counter being greater than or equal to a reading change tolerance;

means for incrementing said stable reading counter in response to the present sensor reading equaling the immediately previous sensor reading;

means for resetting said stable reading counter and reading change counter to zero in response to said stable reading counter being greater than or equal to a stable reading tolerance;

means for reporting a state change event and setting said most-recent stable sensor reading equal to said present sensor reading in response to said present sensor reading not being equal to said most-recent stable sensor reading; and

means for setting said previous sensor reading to said present sensor reading.